Remarks

The Examiner maintained the rejections of claims 3 and 16 under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 4,820,386 to LaConti. The Examiner also rejected claims 3, 6, 16, and 19 under 35 U.S.C. §103 as being unpatentable over LaConti in view of U.S. Patent No. 6,830,730 to Rhodes. The Examiner also maintained the rejections of claims 1-3, 6, 11-14, and 15-19 as being unpatentable under 35 U.S.C. §103 over by LaConti in view of Claims 5,612,225 to Baccanti.

Claims 3, 6, 16, and 18-21 relate to a reactor for oxidizing or reducing the sample; at least two filters coupled to the reactor, each filter for filtering out a different undesirable component and for permitting the desired component to pass through; and a detector coupled to each of the at least two filters for detecting the desired component.

Claims 1, 11-12, and 14-15 relate to an electrochemical gas sensor having an opening in the ionomer membrane extend from a first surface to a second surface and a gas in the opening for simultaneously contacting the electrode and ionomer membrane within the opening.

LaConti lacks any reactor for oxidizing or reducing the sample and lacks at least two filters coupled to the reactor, where a detector is coupled to each filter. The Examiner appears to be relying upon electrode 26 of LaConti to disclose the reactor but the electrode cannot oxidize or reduce the sample, which typically relates to heating the sample or introducing oxygen into the sample. In addition to the lack of a reactor, LaConti fails to disclose of two or more filters coupled to the reactor (electrode 26) where a detector is coupled to each filter.

Even if Applicant concedes that electrode 24 is a detector and that filter 36 is coupled to reactor 26, despite the gap between the shoulder in the housing in which filter 36 sits that would prevent any coupling of the filter 36 with the reactor 26, there

is no disclosure of two filters for filtering out different undesirable components. Moreover, there is no disclosure of a detector coupled to each filter 24 electrode 26 for detecting the desired component. Because numerous limitations claimed in Applicant's claims 3 and 16 are not disclosed by LaConti, LaConti cannot anticipate these claims and the rejections under 35 USC §102 should be withdrawn with respect to claims 3 and 16.

With respect to the rejections under 35 USC §103, Rhodes and Baccanti also lack any teaching or suggestion for at least two filters coupled to the reactor, each filter for filtering out a different undesirable component and for permitting the desired component to pass through, and a detector coupled to each of the at least two filters for detecting the desired component.

Applicants point out that even if a reference discloses multiple filters, there is no teaching or suggestion that the multiple filters are also coupled to the reactor and that there is a detector coupled to each filter.

Because LaConti, Baccanti, and Rhodes in any combination do not teach or suggest at least two filters coupled to the reactor, each filter for filtering out a different undesirable component and for permitting the desired component to pass through, and a detector coupled to each of the at least two filters for detecting the desired component, the cited references do not arrive at Applicants' claimed invention without some modification to the combined art. Without the requisite teaching or suggestion, there is no motivation for one skilled in the art to modify the combination to provide multiple filters and a detector attached to each filter. Further, none of the references are relied upon to show multiple filters and a detector attached to each filter.

For references to be properly modified in a rejection under 35 USC §103, there must be some teaching or suggestion in the references to make the suggested modification. Absent the requisite teaching or suggestion, the modification would be improper. As mentioned above, there is no teaching or suggestion for at least two filters

coupled to the reactor, each filter for filtering out a different undesirable component and for permitting the desired component to pass through, and a detector coupled to each of the at least two filters for detecting the desired component. Without the requisite teachings or suggestions to modify the art to arrive at the claimed invention, the combination of prior art does not make Applicants' claimed filters and detectors obvious.

In addition to the above shortcomings, LaConti also lacks a gas in the opening for simultaneously contacting the electrode and ionomer membrane for providing a three way contact between said gas, electrode, and ionomer membrane within said opening. The outstanding Final Office Action states the membrane 20 is porous and that pores extend from one surface to the other surface of the membrane. Because LaConti also shows the electrode (22, 24, or 26) butted against one surface of the membrane, and not inside any of the pores of the membrane, there cannot be any contact between the gas, electrode, and ionomer mrmbrane within the pore. The pores are too small for the electrode to fit inside in order to permit the three way contact between the gas, electrode, and membrane to be within the pores and there is no teaching or suggestion anywhere in LaConti that the pores are large enough to permit the electrode to be inside so that the three way contact is inside the pores.

Similarly, Rhodes and Baccanti also lack any teaching or suggestion that a three way contact between a gas, electrode, and membrane is within an opening in the membrane. In fact, the outstanding Office Action states both Rhodes and Baccanti do not disclose, teach, or suggest an electrochemical sensor at all, nevermind a three way contact between a gas, electrode, and membrane being inside an opening in the membrane.

Because LaConti, Baccanti, and Rhodes in any combination do not teach or suggest a gas in contact with both the electrode and membrane in an opening in the membrane such that a three way contact between the gas, electrode, and membrane is

within the opening, the cited references do not arrive at Applicants' claimed invention without some modification to the combined art. Without the requisite teaching or suggestion, there is no motivation for one skilled in the art to modify any of the references to provide a gas in contact with both the electrode and membrane in an opening in the membrane such that a three way contact between the gas, electrode, and membrane is within the opening.

For references to be properly modified in a rejection under 35 USC §103, there must be some teaching or suggestion in the references to make the suggested modification. Absent the requisite teaching or suggestion, the modification would be improper. As mentioned above, there is no teaching or suggestion in any of the references to provide Applicants' claimed a gas in contact with both the electrode and membrane in an opening in the membrane such that a three way contact between the gas, electrode, and membrane is within the opening. Without the requisite teachings or suggestions to modify the art to arrive at the claimed invention, the combination of prior art does not make Applicants' claimed three way contact within the opening obvious.

Accordingly, Applicants' traverse the Examiner's 35 U.S.C.§103 rejections of and respectfully submit these rejections be withdrawn.

Respectfully submitted,

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